This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Canceled)

2. (Currently Amended) A transgenic mouse the genome of which contains ~~nonhuman mammal comprising cells that contain~~ a disruption of a ~~the~~ FHIT gene ~~locus~~, wherein said disruption comprises a termination codon in an exon 5 coding region, and wherein said mouse (a) has increased susceptibility to visceral and sebaceous tumors relative to FHIT +/+ mice, or (b) displays increased tumor formation upon being exposed to N-nitrosomethylbenzylamine (hereinafter "NMBA") relative to FHIT +/+ mice.

3. (Currently Amended) A ~~The~~ transgenic mouse ~~mammal of claim 2~~, wherein said mouse ~~which~~ is chimeric for a ~~the~~ disruption of a ~~the~~ FHIT gene ~~locus~~, wherein said disruption comprises a termination codon in an exon 5 coding region, and wherein FHIT +/- progeny of said mouse (a) have increased susceptibility to visceral and sebaceous tumors relative to FHIT +/+ mice, or (b) display increased tumor formation upon being exposed to NMBA relative to FHIT +/+ mice.

4. (Canceled)

5. (Currently Amended) The transgenic mouse of claim 2 ~~4~~, wherein ~~the cells containing a~~ said disruption of the FHIT gene ~~locus are~~ is in both germline and somatic cells.

6. (Currently Amended) The transgenic mouse of claim 2 ~~4~~, wherein said disruption of the FHIT gene ~~locus~~ is homozygous.

7. (Currently Amended) The transgenic mouse of claim 2 ~~4~~, wherein said disruption of the FHIT gene ~~locus~~ is heterozygous.

8. (Currently Amended) The transgenic mouse of claim 6 or 7, said mouse having increased susceptibility ~~being characterized by a predisposition~~ to ~~developing a spectrum of~~ visceral and sebaceous ~~skin~~ tumors relative to FHIT +/+ mice.

9. (Currently Amended) The transgenic mouse of claim 6 or 7, wherein said mouse ~~being~~ displays increased tumor formation upon being exposed ~~characterized by hypersensitivity~~ to NMBA relative to FHIT +/+ mice.

10-12. (Canceled)

13. (Currently amended) A method of testing carcinogenicity of a molecule, comprising

(a) administering said molecule to the transgenic mouse of claim 2, 5, 6 or 7; and

(b) comparing the rate of tumor formation in said transgenic mouse with a control mouse of the same genotype to which the molecule is not administered;

wherein an increased rate of tumor formation following administration of the test molecule is indicative that the molecule is a carcinogen.

14. (Canceled)

15. (Currently amended) A method of testing the therapeutic efficacy of a molecule in treating or preventing cancer comprising:

(a) administering said molecule to the transgenic mouse of claim 2, 5, 6 or 7; and

(b) comparing the rate of tumor formation in said transgenic mouse with a control mouse of the same genotype to which the molecule is not administered;

wherein a reduced rate of tumor formation following administration of the test molecule is indicative that the molecule has therapeutic or prophylactic value for cancer.

16. (Canceled)

17. (Original) The method of claim 15, wherein the cancer is a gastrointestinal cancer.

18. (Canceled)

19. (Original) The method of claim 15, wherein the cancer is a Muir-Torre Syndrome-related cancer.

20. (Canceled)

21. (Original) The method of claim 15, wherein the cancer is hereditary non-polyposis colorectal cancer.

22. (Canceled)